

5D15

June 14, 2001

Re: **09/671,674 (US 5,815,293 and US 5,446,565)**

Dear Examiner Henry,

Attached are the requested litigation search results.

Several patent litigation and news databases were searched using Dialog, Lexis-Nexis and Questel-Orbit search systems.

No Litigation cases were found to be associated with either of these patent numbers.

Thank you for using EIC2800!

Paul Schulwitz
308-6559
CP4-9C18

Source: All Sources : Area of Law - By Topic : Patent Law : Patents : U.S. Patents : Utility Patents 
Terms: patno is 5,815,293 ([Edit Search](#))

Pat. No. 5815293, *

5,815,293

♦ [GET 1st DRAWING SHEET OF 48](#)

Sep. 29, 1998

Compound objective lens having two focal points

REISSUE: Reissue Application filed Sep. 27, 2000 (O.G. Feb. 13, 2001) Ex. Gp.: 2872; Re. S.N. 09/671,674

Reissue Application filed Sep. 27, 2000 (O.G. Nov. 14, 2000) Ex. Gp.: 2872; Re. S.N. 09/671,674

INVENTOR: Komma, Yoshiaki, Kyoto, Japan

Mizuno, Sadao, Osaka, Japan

Nishino, Seiji, Osaka, Japan

ASSIGNEE-AT-ISSUE: Matsushita Electric Industrial Co., Ltd., Osaka, Japan (03)

APPL-NO: 455,934

FILED: May 31, 1995

CERTCORR: Mar. 20, 2001 a Certificate of Correction was issued for this patent (O.G. Mar. 20, 2001)

FOR-PRIOR:

Feb. 1, 1993 Japan 5-14432

Aug. 4, 1993 Japan 5-193353

REL-US-DATA:

Continuation-in-part of Ser. No. 190,520, Feb. 1, 1994 now patented 5,446,565

INT-CL: [6] G02B 5#32; G02B 3#10; G02B 3#08; G02B 7#00

US-CL: 359#19; 29#38A; 359#569; 359#570; 29#38B; 29#563; 82#124; 82#129;

CL: 359;29;82;

SEARCH-FLD: 359#565, 566, 569, 570, 571, 574, 575, 721, 743, 19; 369#103, 44.23, 94, 112

REF-CITED:

U.S. PATENT DOCUMENTS

3,999,009	12/1976	*	Bouwhuis	
4,441,179	4/1984	*	Slaten	
4,450,553	5/1984	*	Holster et al.	
4,637,697	1/1987	*	Freeman	359#565
4,731,772	3/1988	*	Lee	

Source: All Sources : Area of Law - By Topic : Patent Law : Patents : U.S. Patents : Utility Patents
Terms: patn is 5,446,565 (Edit Search)

Pat. No. 5,446,565, *

5,446,565*

♦ GET 1st DRAWING SHEET OF 43

Aug. 29, 1995

Compound objective lens having two focal points

INVENTOR: Komma, Yoshiaki, Kyoto, Japan
Mizuno, Sadao, Osaka, Japan
Nishino, Seji, Osaka, Japan

ASSIGNEE-AT-ISSUE: Matsushita Electric Industrial Co., Ltd., Osaka, Japan (03)

APPL-NO: 190,520

FILED: Feb. 1, 1994

CERTCORR: Dec. 19, 1995 a Certificate of Correction was issued for this Patent

FOR-PRIOR:

Feb. 1, 1993 Japan 5-014432
Aug. 4, 1993 Japan 5-193353

INT-CL: [6] G02B 5#32; G11B 7#00

US-CL: 359#19; 369#44.23; 369#94; 369#103; 369#112

CL: 359;369

SEARCH-FLD: 359#15, 16, 19; 369#94, 103, 109, 112, 44.23

REF-CITED:

U. S. PATENT DOCUMENTS			
<u>3,999,009</u>	12/1976	* Bouwthuis	369#94
<u>4,441,179</u>	4/1984	* Slaten	369#94
<u>4,450,553</u>	5/1984	* Holster et al.	369#94
<u>4,731,772</u>	3/1988	* Lee	
<u>4,733,065</u>	3/1988	* Hoshi et al.	
<u>4,733,943</u>	3/1988	* Suzuki et al.	
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<u>5,062,098</u>	10/1991	* Hori et al.	
<u>5,134,604</u>	7/1992	* Nagashima et al.	369#112
<u>5,202,875</u>	4/1993	* Rosen et al.	369#94
<u>5,243,590</u>	9/1993	* Aratani	369#109

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Sources

All Sources : Area of Law - By Topic : Patent Law : Law Reviews & Journals : Intellectual Property Law
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5,446,565 or 5446565 or us5,446,565 or
us5446565 or 5,815,293 or 5815293 or
us5815293 or us5,815,293

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Sources

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us5446565 or 5,815,293 or 5815293 or
us5815293 or us5,815,293

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us5815293 or us5,815,293

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us5815293 or us5,815,293

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1/39/1

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11861983

Basic Patent (No,Kind,Date): EP 610055 A2 19940810 <No. of Patents: 011>

Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date	
CN 1098508	A	19950208	CN 94103940	A	19940401	
EP 836178	A1	19980415	EP 97122035	A	19940131	
EP 610055	A2	19940810	EP 94300717	A	19940131	(BASIC)
EP 992988	A2	20000412	EP 99123036	A	19940131	
EP 1049084	A2	20001102	EP 2000111253	A	19940131	
EP 610055	A3	19950111	EP 94300717	A	19940131	
JP 7098431	A2	19950411	JP 93328230	A	19931224	
JP 8062493	A2	19960308	JP 95167211	A	19950703	
JP 2532818	B2	19960911	JP 93328230	A	19931224	
US 5446565	A	19950829	US 190520	A	19940201	
US 5815293	A	19980929	US 455934	A	19950531	

Priority Data (No,Kind,Date):

JP 93193353 A 19930804
EP 94300717 A3 19940131
JP 9314432 A 19930201
JP 93328230 A 19931224
JP 95167211 A 19950703
US 455934 A 19950531
US 190520 A2 19940201

PATENT FAMILY:

CHINA (CN)

Patent (No,Kind,Date): CN 1098508 A 19950208
COMPOUND OBJECTIVE LENS... WITH THE BINARY FOCUS MICROSCOPE (English)
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEIJI (JP)
Priority (No,Kind,Date): JP 93193353 A 19930804
Applie (No,Kind,Date): CN 94103940 A 19940401
IPC: * G02B-015/14; G02B-015/16
Derwent WPI Acc No: * G 94-250891
Language of Document: Chinese

EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 836178 A1 19980415
OPTICAL DISK (English; French; German)
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEIJI (JP)
Priority (No,Kind,Date): EP 94300717 A3 19940131; JP 9314432 A 19930201; JP 93193353 A 19930804
Applie (No,Kind,Date): EP 97122035 A 19940131
Designated States: (National) DE; FR; GB; IT
IPC: * G11B-007/135; G11B-007/24; G11B-007/00; G02B-021/02;
G03F-009/00; G02B-005/18; G02B-005/32; G11B-007/007
Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959; G 98-209278
Language of Document: English
Patent (No,Kind,Date): EP 610055 A2 19940810

COMPOUND OBJECTIVE LENS HAVING TWO FOCAL POINTS AND APPARATUS USING THE
LENS. (English; French; German)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO
SEIJI (JP)

Priority (No,Kind,Date): JP 9314432 A 19930201; JP 93193353 A
19930804

Applic (No,Kind,Date): EP 94300717 A 19940131

Designated States: (National) DE; FR; GB; IT

IPC: * G11B-007/135; G11B-007/24; G11B-007/00; G02B-021/02;
G03F-009/00

Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959; G
94-250891

Language of Document: English

Patent (No,Kind,Date): EP 992988 A2 20000412
OPTICAL DISK APPARATUS (English; French; German)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO
SEIJI (JP)

Priority (No,Kind,Date): EP 94300717 A3 19940131; JP 9314432 A
19930201; JP 93193353 A 19930804

Applic (No,Kind,Date): EP 99123036 A 19940131

Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;
IT; LI; LU; MC; NL; PT; SE

IPC: * G11B-007/09

Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959; G
2000-284959

Language of Document: English

Patent (No,Kind,Date): EP 1049084 A2 20001102
COMPOUND OBJECTIVE LENS HAVING TWO FOCAL POINTS AND APPARATUS USING THE
LENS (English; French; German)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO
SEIJI (JP)

Priority (No,Kind,Date): EP 94300717 A3 19940131; JP 9314432 A
19930201; JP 93193353 A 19930804

Applic (No,Kind,Date): EP 2000111253 A 19940131

Designated States: (National) DE; FR; GB; IT

IPC: * G11B-007/135

Derwent WPI Acc No: ; G 2001-017997

Language of Document: English

Patent (No,Kind,Date): EP 610055 A3 19950111
COMPOUND OBJECTIVE LENS HAVING TWO FOCAL POINTS AND APPARATUS USING THE
LENS. (English; French; German)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO
SEIJI (JP)

Priority (No,Kind,Date): JP 9314432 A 19930201; JP 93193353 A
19930804

Applic (No,Kind,Date): EP 94300717 A 19940131

Designated States: (National) DE; FR; GB; IT

IPC: * G11B-007/135; G11B-007/24; G11B-007/00; G02B-021/02;
G03F-009/00

Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959

Language of Document: English

EUROPEAN PATENT OFFICE (EP)

Legal Status (No,Type,Date,Code,Text):

EP 610055 P 19930201 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITY (PATENTANMELDUNG))
 JP 9314432 A 19930201
 EP 610055 P 19930804 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITY (PATENTANMELDUNG))
 JP 93193353 A 19930804
 EP 610055 P 19940131 EP AE EP-APPLICATION
 (EUROPAEISCHE ANMELDUNG)
 EP 94300717 A 19940131
 EP 610055 P 19940810 EP AK DESIGNATED CONTRACTING
 STATES IN AN APPLICATION WITHOUT SEARCH
 REPORT: (IN EINER ANMELDUNG OHNE
 RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)
 DE FR GB IT
 EP 610055 P 19940810 EP A2 PUBLICATION OF APPLICATION
 WITHOUT SEARCH REPORT (VEROEFFENTLICHUNG DER
 ANMELDUNG OHNE RECHERCHENBERICHT)
 EP 610055 P 19940810 EP 17P REQUEST FOR EXAMINATION
 FILED (PRUEFUNGSANTRAG GESTELLT)
 940207
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 STATES IN A SEARCH REPORT: (IN EINEM
 RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)
 DE FR GB IT
 EP 610055 P 19950111 EP A3 SEPARATE PUBLICATION OF THE
 SEARCH REPORT (ART. 93) (GESONDerte
 VEROEFFENTLICHUNG DES RECHERCHENBERICHTS
 (ART. 93))
 EP 610055 P 19970813 EP 17Q FIRST EXAMINATION REPORT
 (ERSTER PRUEFUNGSBESCHEID)
 970626
 EP 610055 P 19980415 EP AH DIVISIONAL APPLICATION (ART.
 76) IN: (TEILANMELDUNG (ART. 76) IN:)
 EP 836178 P
 EP 610055 P 20000112 EP RAHF DIVISIONAL APPLICATION (ART.
 76) IN: (CORRECTION) (TEILANMELDUNG (ART.
 76) IN: (KORR.))
 836178
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 EP 610055 P 20000112 EP RAHF DIVISIONAL APPLICATION (ART.
 76) IN: (CORRECTION) (TEILANMELDUNG (ART.
 76) IN: (KORR.))
 EP 99123036 A 19991119
 EP 610055 P 20000412 EP AH DIVISIONAL APPLICATION (ART.
 76) IN: (TEILANMELDUNG (ART. 76) IN:)
 EP 992988 P
 EP 610055 P 20000719 EP RAHF DIVISIONAL APPLICATION (ART.
 76) IN: (CORRECTION) (TEILANMELDUNG (ART.
 76) IN: (KORR.))
 836178
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 76) IN: (CORRECTION) (TEILANMELDUNG (ART.

76) IN: (KORR.))
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 76) IN: (CORRECTION) (TEILANMELDUNG (ART.
 76) IN: (KORR.))
 EP 2000111253 A 20000525
 EP 610055 P 20001102 EP AH DIVISIONAL APPLICATION (ART.
 76) IN: (TEILANMELDUNG (ART. 76) IN:)
 EP 1049084 P
 EP 836178 P 19930201 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITAET (PATENTANMELDUNG))

 JP 9314432 A 19930201
 EP 836178 P 19930804 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITAET (PATENTANMELDUNG))

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 (AUSSCHEIDUNG AUS)
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 (EUROPAEISCHE ANMELDUNG)
 EP 97122035 A 19940131
 EP 836178 P 19980415 EP AC DIVISIONAL APPLICATION (ART.
 76) OF: (TEILANMELDUNG (ART. 76) AUS:)
 EP 610055 P
 EP 836178 P 19980415 EP AK DESIGNATED CONTRACTING
 STATES IN AN APPLICATION WITH SEARCH REPORT:
 (IN EINER ANMELDUNG BENANNTE VERTRAGSSTAATEN)

 DE FR GB IT
 EP 836178 P 19980415 EP A1 PUBLICATION OF APPLICATION
 WITH SEARCH REPORT (VEROEFFENTLICHUNG DER
 ANMELDUNG MIT RECHERCHENBERICHT)
 EP 836178 P 19980415 EP 17P REQUEST FOR EXAMINATION
 FILED (PRUEFUNGSANTRAG GESTELLT)
 971215
 EP 836178 P 20000209 EP 17Q FIRST EXAMINATION REPORT
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 19991223
 EP 992988 P 19930201 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITAET (PATENTANMELDUNG))

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 EP 992988 P 19930804 EP AA PRIORITY (PATENT
 APPLICATION) (PRIORITAET (PATENTANMELDUNG))

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 EP 992988 P 19940131 EP AA DIVIDED OUT OF
 (AUSSCHEIDUNG AUS)
 EP 94300717 A3 19940131
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 (EUROPAEISCHE ANMELDUNG)
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 EP 992988 P 20000412 EP AC DIVISIONAL APPLICATION (ART.
 76) OF: (TEILANMELDUNG (ART. 76) AUS:)

EP 610055 P

EP 992988 P 20000412 EP AK DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT: (IN EINER ANMELDUNG OHNE RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)

AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL
PT SE

EP 992988 P 20000412 EP A2 PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT (VEROEFFENTLICHUNG DER ANMELDUNG OHNE RECHERCHENBERICHT)

EP 1049084 P 19930201 EP AA PRIORITY (PATENT APPLICATION) (PRIORITAET (PATENTANMELDUNG))

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EP 94300717 A3 19940131

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EP 2000111253 A 19940131

EP 1049084 P 20001102 EP AC DIVISIONAL APPLICATION (ART. 76) OF: (TEILANMELDUNG (ART. 76) AUS:)
EP 610055 P

EP 1049084 P 20001102 EP AK DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT: (IN EINER ANMELDUNG OHNE RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)

DE FR GB IT
EP 1049084 P 20001102 EP A2 PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT (VEROEFFENTLICHUNG DER ANMELDUNG OHNE RECHERCHENBERICHT)

JAPAN (JP)

Patent (No,Kind,Date): JP 7098431 A2 19950411
OBJECTIVE LENS, CONDENSING OPTICAL SYSTEM, OPTICAL HEAD DEVICE, OPTICAL DISK DEVICE, OPTICAL DISK, MICROSCOPE AND EXPOSURE DEVICE (English)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD

Author (Inventor): KANEUMA YOSHIAKI; MIZUNO SADAO; NISHINO SEIJI

Priority (No,Kind,Date): JP 93328230 A 19931224; JP 9314432 A 19930201; JP 93193353 A 19930804

Applic (No,Kind,Date): JP 93328230 A 19931224
IPC: * G02B-013/00; G02B-005/32; G11B-007/135

Derwent WPI Acc No: * G 94-250891

Language of Document: Japanese

Patent (No,Kind,Date): JP 8062493 A2 19960308
OBJECTIVE LENS AND OPTICAL DISC DEVICE (English)

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD

Author (Inventor): KANEUMA YOSHIAKI; MIZUNO SADAO; NISHINO SEIJI

Priority (No,Kind,Date): JP 95167211 A 19950703; JP 9314432 A 19930201; JP 93193353 A 19930804

Applic (No,Kind,Date): JP 95167211 A 19950703
IPC: * G02B-013/00; G02B-005/18; G02B-005/32; G02B-021/02;

G11B-007/095; G11B-007/135; G11B-007/24; G11B-019/12
Derwent WPI Acc No: * G 94-250891
Language of Document: Japanese
Patent (No,Kind,Date): JP 2532818 B2 19960911
Priority (No,Kind,Date): JP 93328230 A 19931224; JP 9314432 A 19930201; JP 93193353 A 19930804
Aplic (No,Kind,Date): JP 93328230 A 19931224
IPC: * G02B-013/00; G02B-005/32; G11B-007/135
Derwent WPI Acc No: * G 94-250891
Language of Document: Japanese

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5446565 A 19950829
COMPOUND OBJECTIVE LENS HAVING TWO FOCAL POINTS (English)
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEIJI (JP)
Priority (No,Kind,Date): JP 9314432 A 19930201; JP 93193353 A 19930804
Aplic (No,Kind,Date): US 190520 A 19940201
National Class: * 359019000; 369044230; 369094000; 369103000; 369112000
IPC: * G02B-005/32; G11B-007/00
Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959
Language of Document: English
Patent (No,Kind,Date): US 5815293 A 19980929
COMPOUND OBJECTIVE LENS HAVING TWO FOCAL POINTS (English)
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (JP)
Author (Inventor): KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEIJI (JP)
Priority (No,Kind,Date): US 455934 A 19950531; JP 9314432 A 19930201; JP 93193353 A 19930804; US 190520 A2 19940201
Aplic (No,Kind,Date): US 455934 A 19950531
Addnl Info: 5446565 Patented
National Class: * 359019000; 359569000; 359570000; 359721000; 359743000; 369103000; 369112000; 369044230
IPC: * G02B-005/32; G02B-003/10; G02B-003/08; G02B-007/00
Derwent WPI Acc No: * G 94-250891; G 98-209278; G 2000-284959
Language of Document: English

UNITED STATES OF AMERICA (US)

Legal_Status-(No,Type,Date,Code,Text):
US 5446565 P 19930201 US AA PRIORITY (PATENT)
JP 9314432 A 19930201
US 5446565 P 19930804 US AA PRIORITY (PATENT)
JP 93193353 A 19930804
US 5446565 P 19940201 US AE APPLICATION DATA (PATENT)
(APPL. DATA (PATENT))
US 190520 A 19940201
US 5446565 P 19940330 US AS02 ASSIGNMENT OF ASSIGNEE'S
INTEREST
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
1006, OAZA KADOMA, KADOMA-SHI OSAKA, JA;
KOMMA, YOSHIAKI : 19940125; MIZUNO, SADAO :
19940125; NISHINO, SEIJI : 19940125
US 5446565 P 19950829 US A PATENT
US 5446565 P 19951219 US CC CERTIFICATE OF CORRECTION

US 5815293 P 19930201 US AA PRIORITY (PATENT)
JP 9314432 A 19930201
US 5815293 P 19930804 US AA PRIORITY (PATENT)
JP 93193353 A 19930804
US 5815293 P 19940201 US AA PRIORITY
US 190520 A2 19940201
US 5815293 P 19950531 US AE APPLICATION DATA (PATENT)
(APPL. DATA (PATENT))
US 455934 A 19950531
US 5815293 P 19960228 US AS02 ASSIGNMENT OF ASSIGNOR'S
INTEREST
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
1006, OAZA KADOMA, KADOMA-SHI OSAKA, JA ;
KOMMA, YOSHIAKI : 19960221; MIZUNO, SADAQO :
19960216; NISHINO, SEIJI : 19960216
US 5815293 P 19980929 US A PATENT
US 5815293 P 20001114 US RF REISSUE APPLICATION FILED
(REISSUE APPL. FILED)
20000927
US 5815293 P 20010213 US RF REISSUE APPLICATION FILED
(REISSUE APPL. FILED)
20000927
US 5815293 P 20010320 US CC CERTIFICATE OF CORRECTION

1/1 PLUSPAT - (C) QUESTEL-ORBIT

PN - US5815293 A 19980929 [US5815293]

TI - (A) Compound objective lens having two focal points

PA - (A) MATSUSHITA ELECTRIC IND CO LTD (JP)

IN - (A) KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEIJI (JP)

AP - US45593495 19950531 [1995US-0455934]

PR - US45593495 19950531 [1995US-0455934]

- JP1443293 19930201 [1993JP-0014432]

- JP19335393 19930804 [1993JP-0193353]

- US19052094 19940201 [1994US-0190520]

IC - (A) G02B-003/08 G02B-003/10 G02B-005/32 G02B-007/00

EC - G11B-007/135A

- G11B-007/135F

- G11B-019/12

PCL - ORIGINAL (O) : 359019000; CROSS-REFERENCE (X) : 359569000 359570000

359721000 359743000 369044230 369103000 369112080 369112100

DT - Basic

CT - US3999009; US4441179; US4450553; US4637697; US4731772; US4733065;

US4733943; US4757197; US4758062; US4876680; US4929823; US4945529;

US4986641; US5017000; US5056908; US5062098; US5073007; US5111448;

US5116111; US5122903; US5129718; US5134604; US5161040; US5175651;

US5177349; US5202875; US5218471; US5227915; US5229797; US5243590;

US5245596; US5251198; US5278816; US5303224; US5344447; US5442480;

EP0341743; EP0357780; EP0367878; EP0452953; EP0457553; EP0470807;

EP0486060; JP61-73246; JP61-131245; JP61-189504; JP62-073429;

JP63-241735; JP222452; JP2185722; JP4212730; JP5101540; JP5205282

- "Optical Design with Diffractive Lenses" by D. Faklis et al;
Designer's Handbook; Photonics Spectra, Nov., 1991, pp. 205-208.

"Diffractive Lenses in Broadband Optical System Design" by D. Faklis
et al; Designer's Handbook; Photonics Spectra, Dec., 1991, pp. 131-134.

Spherical Grating Objective Lenses for Optical Disk Pick-Ups, K. Goto
et al; Proc. Int. Symp. on Optical Memory, 1987; Japanese Journal of
Applied Physics, vol. 26 (1987) Supplement 26-4, pp. 135-140.

"APO-Tele Lenses with Kinoform Elements" by M.A. Gan et al; SPIE vol.
1507 Holographic Optics III; Principles and Applications (1991), pp.
116-125.

"Design of Some Achromatic Imaging Hybrid Diffractive-Refractive
Lenses" by P. Twardowski et al; SPIE vol. 1507 Holographic Optics III;
Principles and Applications (1991); pp. 55-56.

Applied Optics, vol. 29, No. 7, 1 Mar. 1990, New York, US, pp.
994-997; XP000101359, Ojeda-Castaneda & Berriel-Valdos 'Zone plate for
arbitrarily high focal depth'.

STG - (A) United States patent

AB - A compound objective lens is composed of a hologram lens or
transmitting a part of incident light without any diffraction to form
a beam of transmitted light and diffracting a remaining part of the
incident light to form a beam of first-order diffracted light, and an
objective lens for converging the transmitted light to form a first
converging spot on a front surface of a thin type of first information
medium and converging the diffracted light to form a second converging
spot on a front surface of a thick type of second information medium.
Because the hologram selectively functions as a concave lens for the

diffracted light, a curvature of the transmitted light differs from that of the diffracted light. Therefore, even though the first and second information mediums have different thicknesses, the transmitted light incident on rear surface of the first information medium is converged on the its front surface, and the diffracted light incident on a rear surface of the second information medium is converged on the its front surface. That is, the compound objective lens has two focal points.

1/1 LGST - (C) LEGSTAT
PN - US 5815293 [US5815293]
AP - US 455934/95 19950531 [1995US-0455934]
DT - US-P
ACT - 19950531 US/AE-A
APPLICATION DATA (PATENT)
{US 455934/95 19950531 [1995US-0455934]}
- 19960228 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. 1006, OAZA KADOMA, KADOMA-SHI
OSAKA, JA * KOMMA, YOSHIAKI : 19960221; MIZUNO, SADAO : 19960216;
NISHINO, SEIJI : 19960216
- 19980929 US/A
PATENT
- 20001114 US/RF
REISSUE APPLICATION FILED
20000927
- 20010213 US/RF
REISSUE APPLICATION FILED
20000927
- 20010320 US/CC
CERTIFICATE OF CORRECTION
UP - 2001-12

1/1 CRXX - (C) CLAIMS/RRX
AN - 3047909
PN - 5,815,293 A 19980929 [US5815293]
PA - Matsushita Electric Industrial Co Ltd JP
PT - E (Electrical)
ACT - 20000927 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20001114
REISSUE REQUEST NUMBER: 09/671674
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2872

Reissue Patent Number:

- 20000927 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010213
REISSUE REQUEST NUMBER: 09/671674
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2872

Reissue Patent Number:

- 20010320 CERTIFICATE OF CORRECTION

UP - 2000-46
UACT- 2001-02-13
UCOR- 2001-03-20

1/3 PAST - (C) PAST
AN - 200112-000129
PN - 5815293 A [US5815293]
DT - A (UTILITY)
OG - 2001-03-20
CO - COR
ACT - CERTIFICATE OF CORRECTION
SH - CERTIFICATE OF CORRECTION

2/3 PAST - (C) PAST
AN - 200107-001237
PN - 5815293 A [US5815293]
DT - A (UTILITY)
OG - 2001-02-13
CO - REA
ACT - REISSUE APPLICATION FILED
SH - REISSUE APPLICATION FILED

3/3 PAST - (C) PAST
AN - 200046-001216
PN - 5815293 A [US5815293]
DT - A (UTILITY)
OG - 2000-11-14
CO - REA
ACT - REISSUE APPLICATION FILED
SH - REISSUE APPLICATION FILED

1/1 PLUSPAT - (C) QUESTEL-ORBIT

PN - US5446565 A 19950829 [US5446565]

TI - (A) Compound objective lens having two focal points

PA - (A) MATSUSHITA ELECTRIC IND CO LTD (JP)

IN - (A) KOMMA YOSHIAKI (JP); MIZUNO SADAO (JP); NISHINO SEJI (JP)

AP - US19052094 19940201 [1994US-0190520]

PR - JP1443293 19930201 [1993JP-0014432]

- JP19335393 19930804 [1993JP-0193353]

IC - (A) G02B-005/32 G11B-007/00

EC - G02B-005/18Z

- G02B-005/32

- G03F-009/00

- G03F-009/00T

- G11B-007/09A

- G11B-007/09B2

- G11B-007/09B4

- G11B-007/135A

- G11B-007/135F

- G11B-007/24

- G11B-019/12

ICO - S11B-007/12H

PCL - ORIGINAL (O) : 369044230; CROSS-REFERENCE (X) : 369094000 369103000
369112100 369112120

DT - Corresponding document

CT - US3999009; US4441179; US4450553; US4731772; US4733065; US4733943;
US4757197; US4758062; US4876680; US4945529; US5062098; US5134604;
US5202875; US5243590; US5245596; US5251198; US5278816; US5303224;
EP0341743; EP0357780; EP0367878; EP0457553; EP0470807; JP61-131245;
JP61-189504; JP62-073429; JP63-241735; JP222452; JP2185722; JP4212730;
JP5205282
- Applied Optics, vol. 29, No. 7, 1 Mar. 1990, New York, US, pp.
994-997, XP000101359, Ojeda-Castaneda & Berriel-Valdos 'Zone plate for
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116-125.

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1/1 LGST - (C) LEGSTAT
PN - US 5446565 [US5446565]
AP - US 190520/94 19940201 [1994US-0190520]
DT - US-P
ACT - 19940201 US/AE-A
APPLICATION DATA (PATENT)
{US 190520/94 19940201 [1994US-0190520]}
- 19940330 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. 1006, OAZA KADOMA, KADOMA-SHI
OSAKA, JA * KOMMA, YOSHIAKI : 19940125; MIZUNO, SADAQ : 19940125;
NISHINO, SEIJI : 19940125
- 19950829 US/A
PATENT
- 19951219 US/CC
CERTIFICATE OF CORRECTION
UP - 1999-17

1/1 PAST - (C) PAST
AN - 199551-001379
PN - 5446565 A [US5446565]
DT - A (UTILITY)
OG - 1995-12-19
CO - COR
ACT - CERTIFICATE OF CORRECTION
SH - CERTIFICATE OF CORRECTION